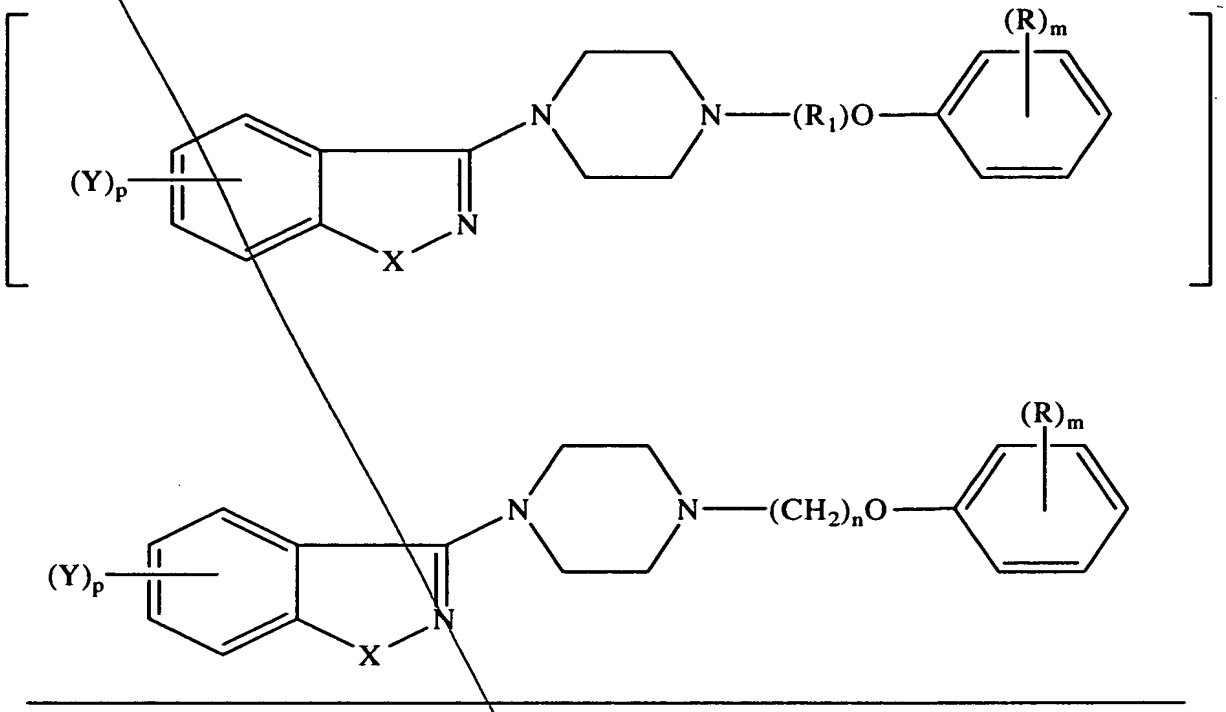
follows.

In the Claims

Please amend claims 1, 9, 25, 27, 29, 30, 31, 32, 33, 37, 46, 54, 66, 74, 86, 87, 88, 89, 92, 93, and 104 without prejudice, as follows

1. (Thrice Amended) A compound of the formula:



wherein,

X is -O-, -S-, -NH-, or [-N(R$_2$)] -N-R$_2$;

R$_2$ is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C$_3$-C$_{10}$) cycloalkyl, aroyl, (C$_2$-C$_{11}$) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4 or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

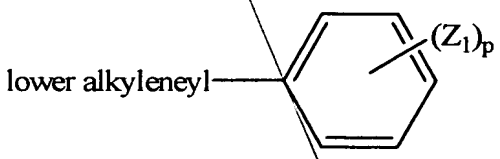
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group, or



;

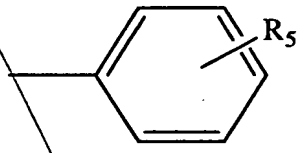
where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio,

trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR$_7$)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

wherein alkyl is lower alkyl;

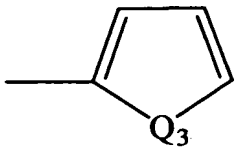
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9;]

R_7 is hydrogen, lower alkyl, or [alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR$_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,
where aryl and heteroaryl are as defined above;]
and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, [C_1 =14 C_4] C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1 - C_4 alkoxy, or -$COOR_{23}$ where R_{23} is H or C_1 - C_4 alkyl;

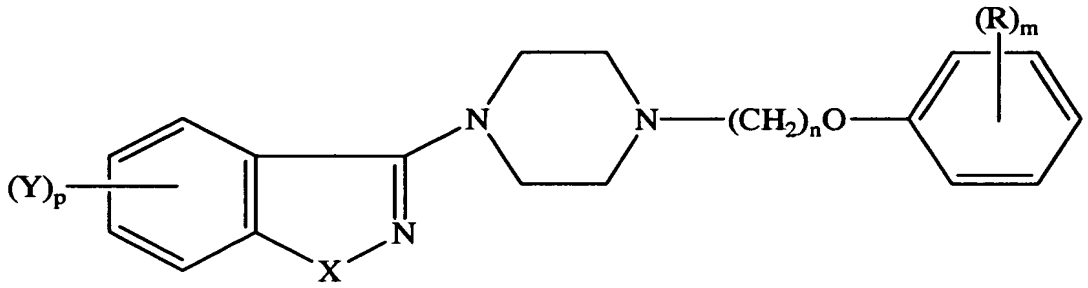
with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof.

C2

9. (Twice Amended) A compound as claimed in claim 1, wherein X is –O–, –S–, or –NH–; Y is H, Cl, F, or $-CF_3$; R is selected from the group consisting of hydrogen, C_1–C_3 alkyl, C_1–C_3 alkoxy, –OH, Cl, F, Br, I, [acyl,] C_1–C_3 monoalkylamino, acylamino, [$-NO_2-$,] $-NO_2$, $-OCF_3$, or $-CF_3$; and n is 2, 3, or 4.

25. (Amended three times) A compound of the formula:



C 3

wherein X is -O-, -S-, -NH-, or [-N-R_2] $\underline{-N-R_2}$;

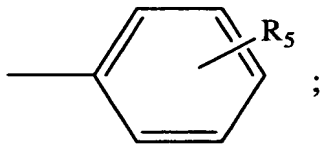
p is 1 or 2;

Y is hydrogen, Cl, Br, or F when p is 1;

Y is lower alkoxy [or halogen] when p is 2 and X is -O-;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and [phenyl sulfonyl] phenylsulfonyl groups;

aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

n is 2, 3, or 4;

R is hydrogen, C_1–C_3 alkyl, C_1–C_3 alkoxy, hydroxyl, [acyl, (C_2–C_{11}) alkanyol,] Cl, F, Br, I, amino, C_1–C_3 mono- or dialkylamino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, (C3) $-C(=O)$-alkyl, or $-CH(OR_7)$-alkyl;

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

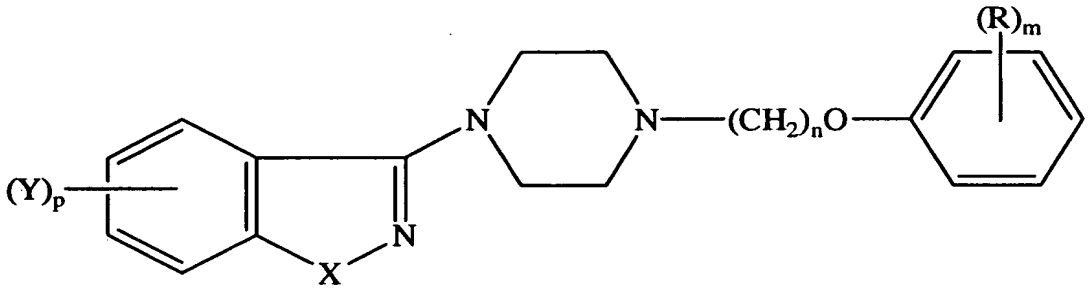
m is 1, 2, or 3;

with the exclusion of compounds wherein X is –O– or –S–, Y is hydrogen, and R is hydrogen, C_1–C_3 alkyl, chlorine, fluorine, bromine, iodine, or C_1–C_3 alkoxy;

with the exclusion of compounds wherein X is –S–, R is H, and m=1;

or a pharmaceutically acceptable acid addition salt thereof.

27. (Thrice Amended) A compound of the formula:



C4

wherein X is -S-;

p is 1 [or 2];

Y is hydrogen, Cl, Br, or F[, when p is 1];

[Y is lower alkoxy or halogen when p is 2;]

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanyol,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, -C(=O)-alkyl, or $-CH(OR_7)$-alkyl[,];

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

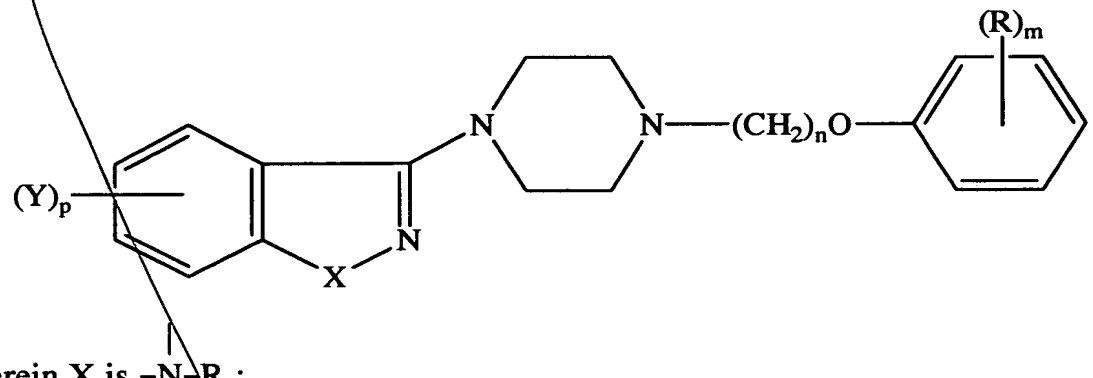
m is 1, 2, or 3;

with the exclusion of compounds wherein Y is hydrogen, and R is hydrogen, C_1-C_3 alkyl, chlorine, fluorine, bromine, iodine, or C_1-C_3 alkoxy;

with the exclusion of compounds wherein R is H, and m=1;

or a pharmaceutically acceptable acid addition salt thereof.

29. (Thrice Amended) A compound of the formula:



wherein X is $-N-R_2$;

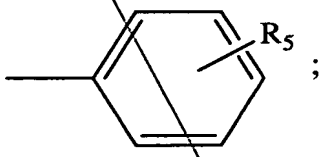
p is 1 [or 2];

Y is hydrogen, Cl, Br, or F[, when p is 1];

[Y is lower alkoxy or halogen when p is 2;]

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) [aroyl,] alkanoyl, and phenylsulfonyl groups;

aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [acyl, (C_2-C_{11}) alkanyol,] Cl, F, Br, I, amino, C_1-C_3 mono- or dialkylamino, acylamino, $-NO_2$, $-OCF_3$,

F, Br, I, amino, C_1–C_3 mono- or dialkylamino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, $-C(=O)$–alkyl, or $-CH(OR_7)$–alkyl[,];

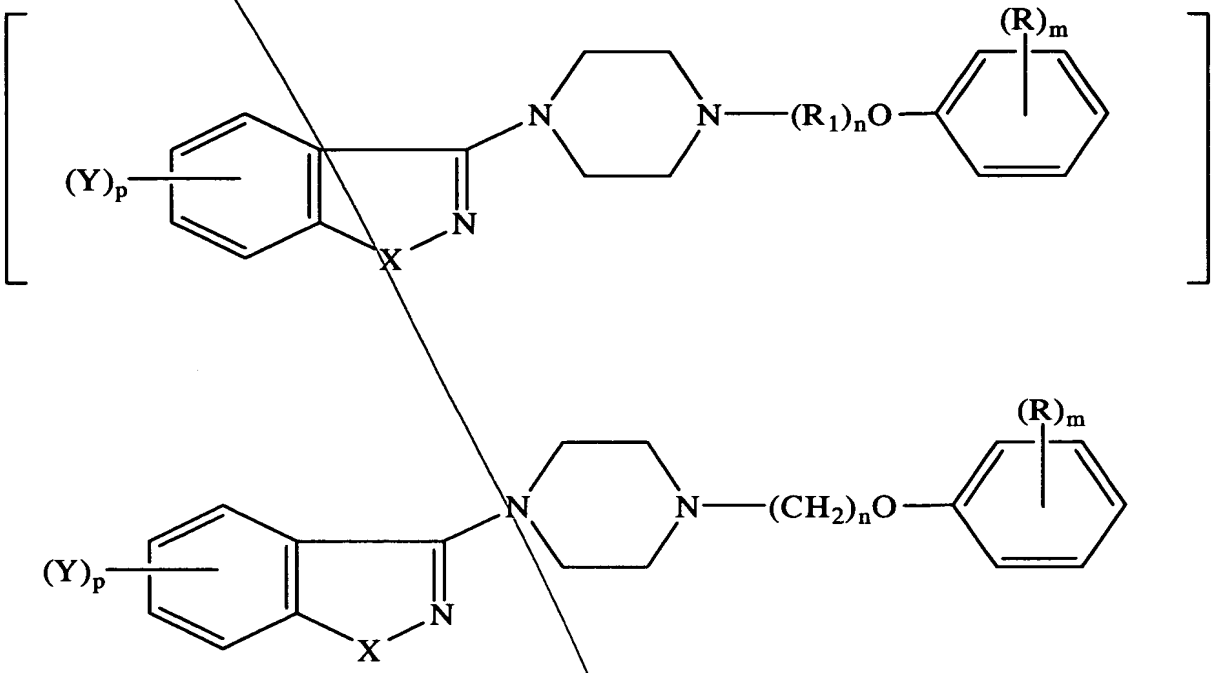
alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, or acyl; and

m is 1, 2, or 3;

or a pharmaceutically acceptable acid addition salt thereof.

30. (Thrice Amended) A pharmaceutical composition, which comprises a compound of the formula:



wherein X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

wherein aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4 or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

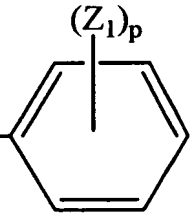
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the $-CH=CH-$ bond being cis or trans;

R_{22} iS R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group, or

lower alkylenyl— 

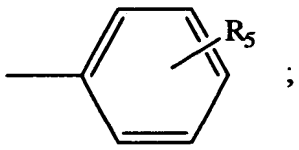
;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] $-C(=O)-$alkyl, $-C(=O)-O-$alkyl, $-C(=O)-$aryl, $-C(=O)-$heteroaryl, or $-CH(OR_7)-$alkyl[,]; [$-C(=W)-$alkyl, $-C(=W)-$aryl, or $-C(=W)-$heteroaryl;]

alkyl is lower alkyl;

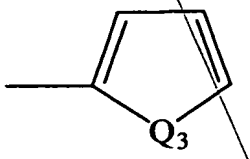
aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9 ;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or -NHR_{10} ; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl, where aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

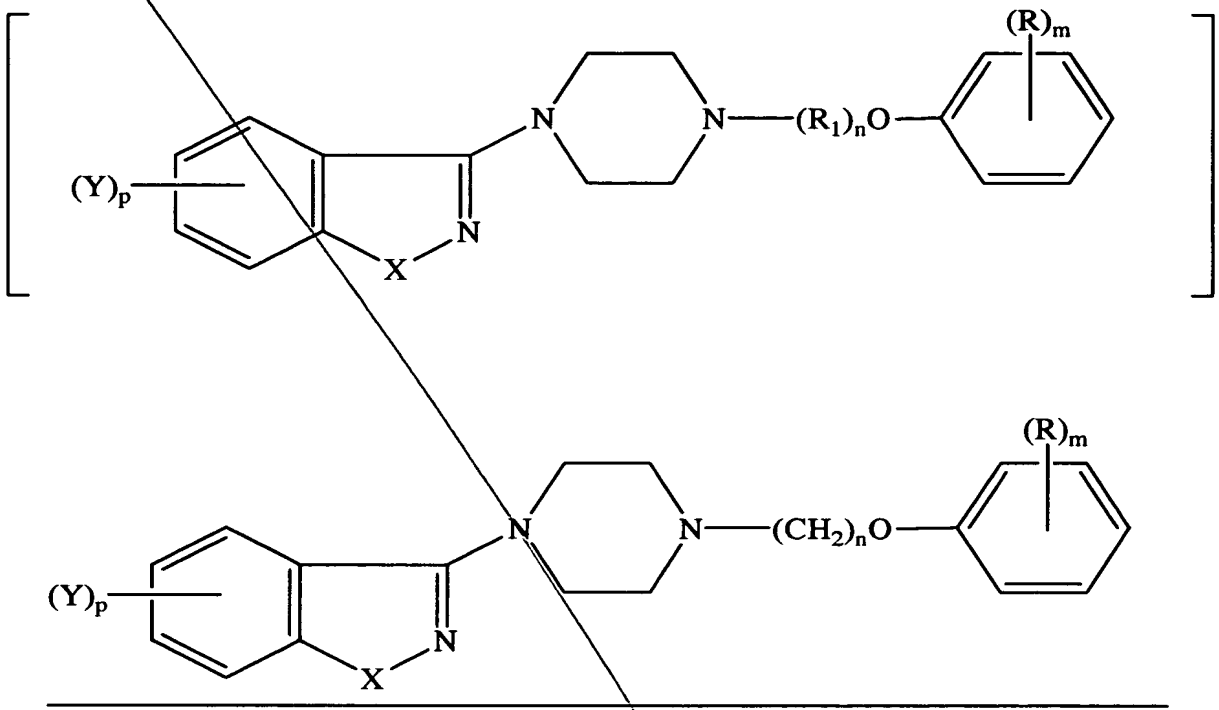
with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1 - C_4

alkoxy, or $-COOR_{23}$ where R_{23} is H or $C_1 - C_4$ alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

31\ (Amended three times) An antipsychotic composition, which comprises a compound of the formula:



wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups; wherein aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4 or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

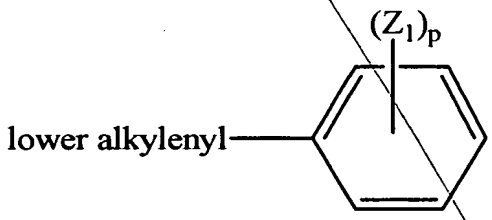
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group, or



;

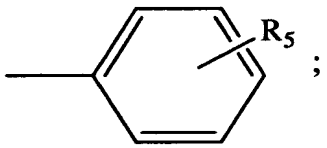
where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, a p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or $-CH(OR_7)$-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or

-C(=W)-heteroaryl;]

alkyl is lower alkyl;

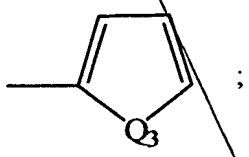
aryl is phenyl or



;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or $N-R_9$;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl, where aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

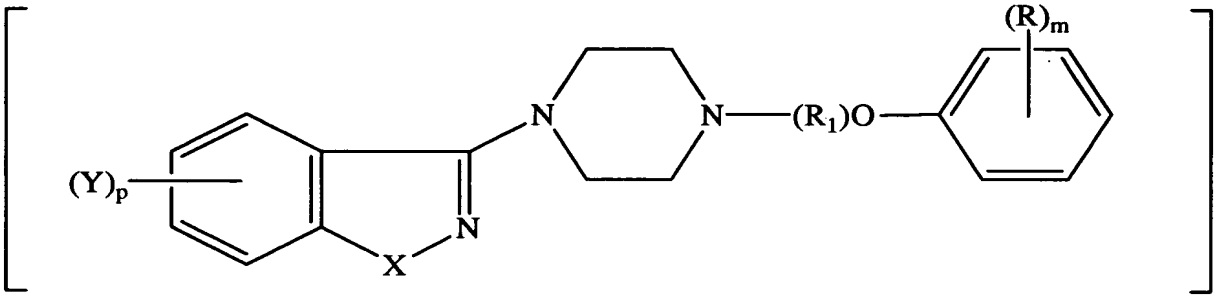
with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R

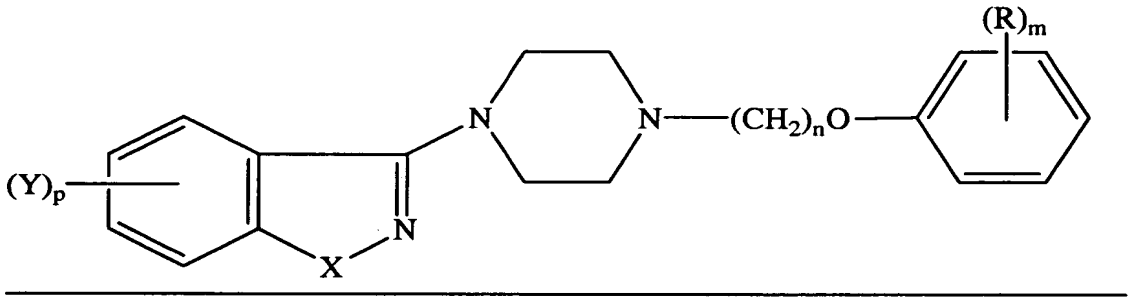
is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1 - C_4 alkoxy, or $-COOR_{23}$ where R_{23} is H or C_1 - C_4 alkyl;

with the exclusion of compounds wherein X is -S-, [R_1 is R_{20},] R is H, and m=1; [all geometric, optical and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

32 . (Thrice Amended) A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound of the formula:

C 5





wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

where aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower

alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4, or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

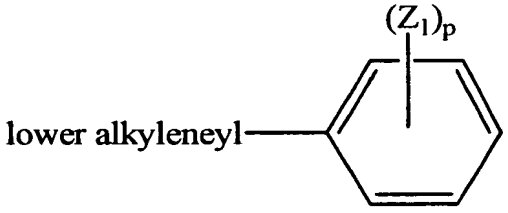
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{22} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or



;

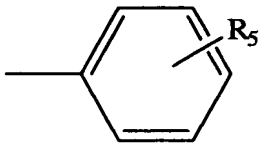
where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,]

-C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR$_7$)-alkyl[,]; [-C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;]

wherein alkyl is lower alkyl;

aryl is phenyl or

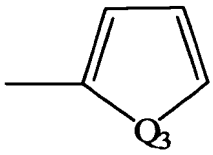


;

CS

wherein R$_5$ is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

Q$_3$ is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R$_9$;]

R$_7$ is hydrogen, lower alkyl, or [(C$_2$-C$_{11}$) alkanoyl] acyl;

[R$_8$ is lower alkyl;

R$_9$ is hydroxy, alkoxy, or -NHR$_{10}$; and

R$_{10}$ is hydrogen, lower alkyl, C$_1$-C$_3$ acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;]

and

m is 1, 2, or 3;

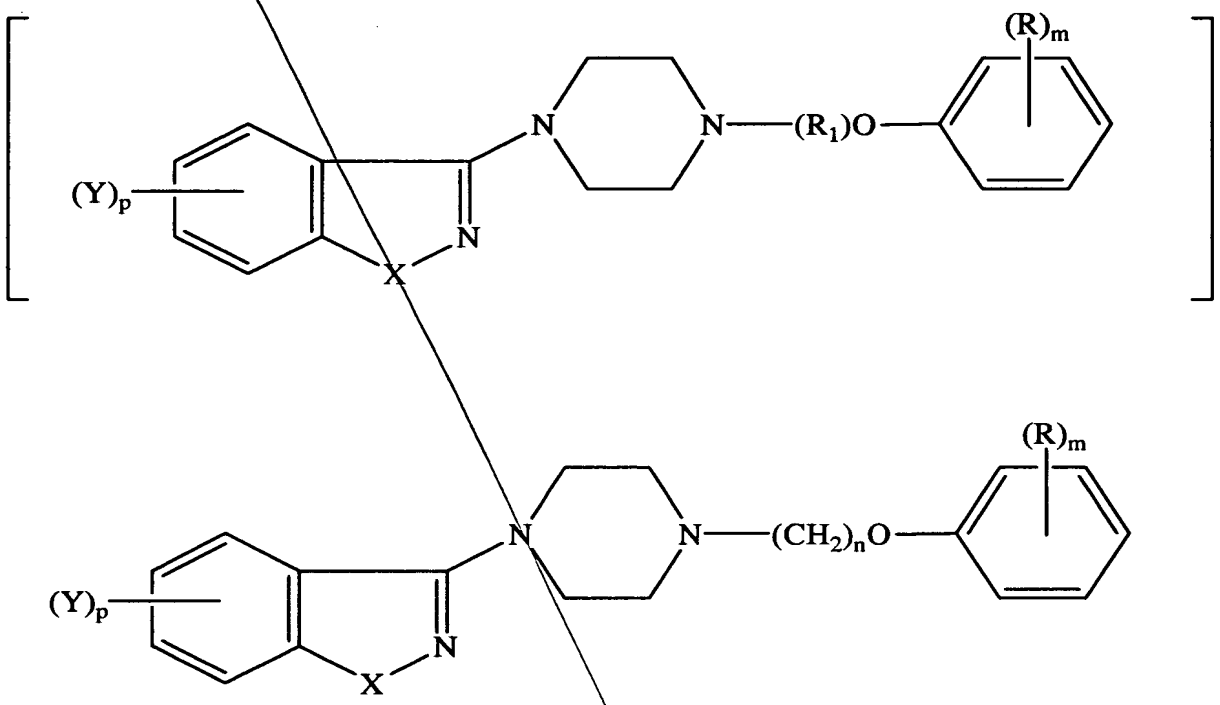
with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1–C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1–C_4 alkoxy, or –$COOR_{23}$

wherein R_{23} is H or C_1–C_4 alkyl;

with the exclusion of compounds wherein X is –S–, [R_1 is R_{20},] R is H, and m=1;

[all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof.

33. (Thrice Amended) An analgesic composition, which comprises a compound of the formula:



wherein,

X is -O-, -S-, -NH-, or [-N(R_2)] -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

wherein aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy when p is 2 and X is -O-;

[R_1 is R_{20}, R_{21} or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4, or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

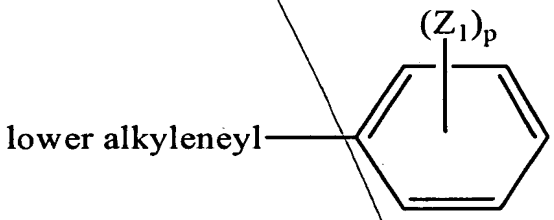
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2$,

the -CH=CH- bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least on C_1-C_6 linear alkyl group, phenyl group, or



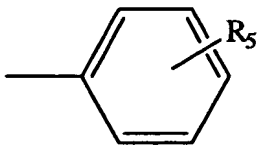
where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen, and p is as previously defined;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or

$-CH(OR_7)$-alkyl[,]; [$-C(=W)$-alkyl, $-C(=W)$-aryl, or $-C(=W)$-heteroaryl;]

wherein alkyl is lower alkyl;

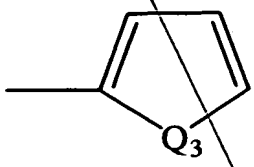
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano,trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is $-O-$, $-S-$, $-NH-$, or $-CH=N-$;

[W is CH_2 or CHR_8 or $N-R_9$;]

R_7 is hydrogen, lower alkyl, or [(C_2-C_{11}) alkanoyl] acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, $-C(=O)$-aryl or $-C(=O)$-heteroaryl, wherein aryl and heteroaryl are as defined above;] and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1–C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1–C_4 alkoxy, or –$COOR_{23}$

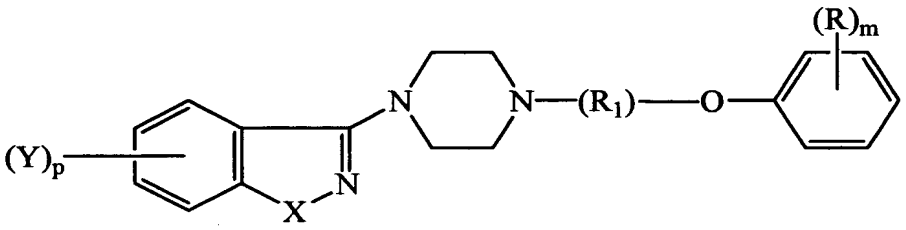
wherein R_{23} is H or C_1–C_4 alkyl;

with the exclusion of compounds wherein X is –S–, [R_1 is R_{20},] R is H, and m=1; [all geometric, optical, and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

CP
SJH
03

C6 37. (Amended) A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 1, 25, 26, 27, [29] 28 or 29.

46. (Amended) A compound of the formula



C7

wherein

X is –O–, –S–, –NH–, or –N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3–C_{10}) cycloalkyl, aroyl, (C_2–C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R_1) is

–CH_2–CH=CH–CH_2–,

–CH_2–C≡C–CH_2–,

–CH_2–CH=CH–CH_2–CH_2–,

–CH_2–CH_2–CH=CH–CH_2–,

–CH_2–C≡C–CH_2–CH_2–, or

–CH_2–CH_2–C≡C–CH_2–,

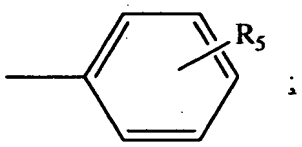
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR$_7$)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

C7

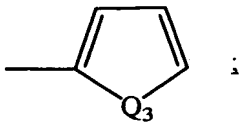
wherein alkyl is lower alkyl;

aryl is phenyl or



wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1–C_3 acyl, aryl, $-C(=O)$–aryl, or $-C(=O)$–heteroaryl,

wherein aryl and heteroaryl are as defined above; and

C 7

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1–C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1–C_4 alkoxy, or $-COOR_{23}$

wherein R_{23} is H or C_1–C_4 alkyl;

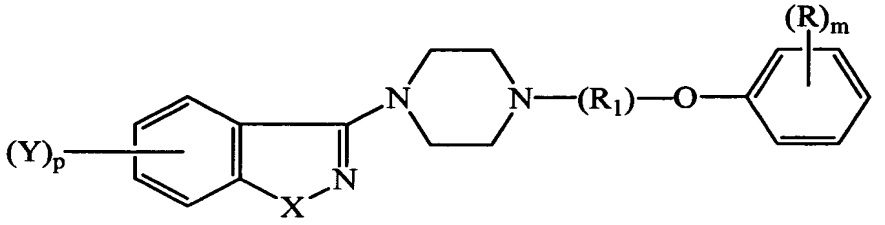
all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

54. (Amended) A compound as claimed in claim 46, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, or $-CF_3$; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, $-NO_2$, $-OCF_3$, or $-CF_3$.

C 8

66. (Amended) A compound of the formula

C9



wherein

X is –O–, –S–, –NH–, or –N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3–C_{10}) cycloalkyl, aroyl, (C_2–C_{11}) alkanoyl, and phenylsulfonyl groups;

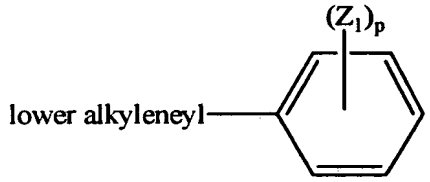
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1–C_6 linear alkyl group, phenyl group or



;

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wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

C 9

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

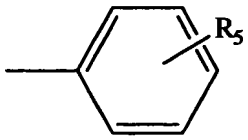
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl,

-C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or

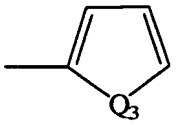


;

C 9

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or $-COOR_{23}$

C 9

wherein R_{23} is H or C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

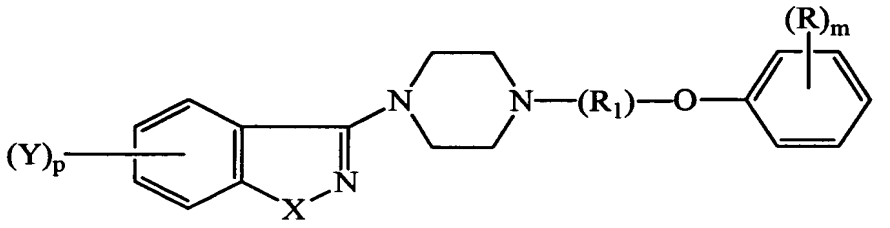
all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

74. (Amended) A compound as claimed in claim 66, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, or $-CF_3$; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, $-NO_2$, $-OCF_3$, or $-CF_3$; and n is 2, 3, or 4.

C 10

86. (Amended) A pharmaceutical composition, which comprises a compound of the formula

C11



wherein

X is –O–, –S–, –NH–, or –N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3–C_{10}) cycloalkyl, aroyl, (C_2–C_{11})alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R_1) is

–CH_2–CH=CH–CH_2–,

–CH_2–C≡C–CH_2–,

–CH_2–CH=CH–CH_2–CH_2–,

–CH_2–CH_2–CH=CH–CH_2–,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

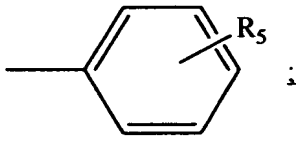
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

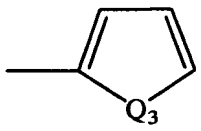
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

C11

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl, where aryl and heteroaryl are as defined above; and

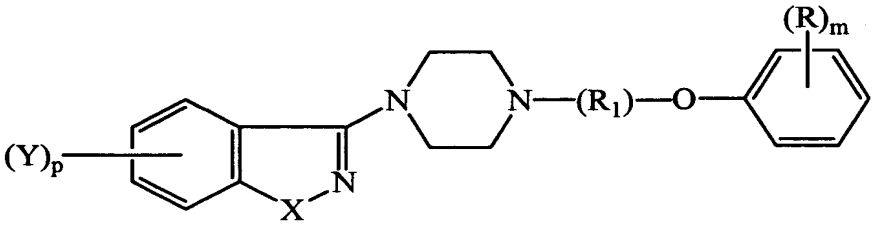
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$

wherein R_{23} is H or C_1-C_4 alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

87. (Amended) A pharmaceutical composition, which comprises a compound of the formula



wherein

X is –O–, –S–, –NH–, or –N(R$_2$);

R$_2$ is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C$_3$–C$_{10}$) cycloalkyl, aroyl, (C$_2$–C$_{11}$) alkanoyl, and phenylsulfonyl groups;

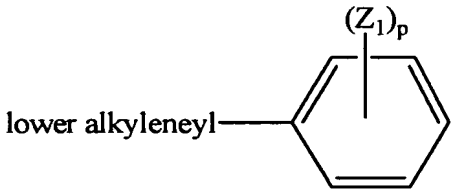
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R$_1$) is R$_{20}$ or R$_{21}$ in which one or more carbon atoms of R$_{20}$ or R$_{21}$ are substituted by at least one C$_1$–C$_6$ linear alkyl group, phenyl group or



;

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wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

C 11

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

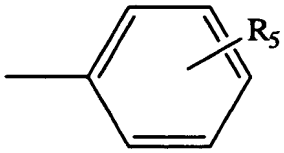
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or

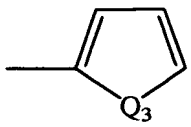


;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

C 11

heteroaryl is



;

wherein Q_3 is –O–, –S–, –NH–, or –CH=N–;

W is CH_2 or CHR_8 or $N–R_9$;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $–NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1–C_3 acyl, aryl, –C(=O)–aryl, or –C(=O)–heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or $-COOR_{23}$

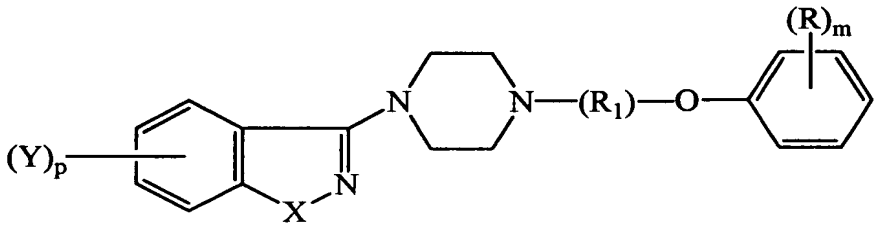
C 11

wherein R_{23} is H or C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, and a pharmaceutically acceptable carrier therefor.

88. (Amended) An antipsychotic composition, which comprises a compound of the formula



C 11

wherein

X is –O–, –S–, –NH–, or –N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3–C_{10}) cycloalkyl, aroyl, (C_2–C_{11}) alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R_1) is

–CH_2–CH=CH–CH_2–,

–CH_2–C≡C–CH_2–,

–CH_2–CH=CH–CH_2–CH_2–,

-CH_2-CH_2-CH=CH-CH_2-,

-CH_2-C≡C-CH_2-CH_2-, or

-CH_2-CH_2-C≡C-CH_2-,

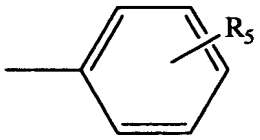
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

C 11

wherein alkyl is lower alkyl;

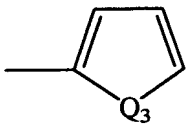
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

C 11

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl, wherein aryl and heteroaryl are as defined above; and

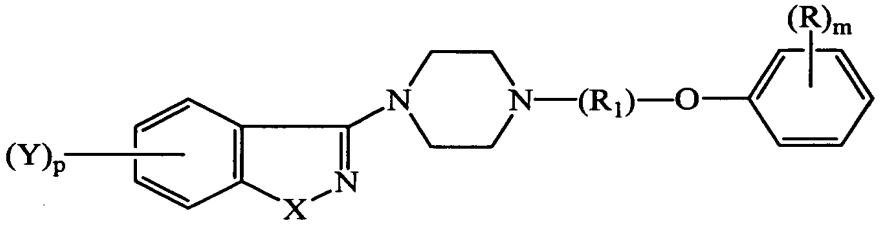
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$

wherein R_{23} is H or C_1-C_4 alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

89. (Amended) An antipsychotic composition, which comprises a compound of the formula



C 11

wherein

X is -O-, -S-, -NH-, or $-\overset{|}{N}(R_2)$;

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

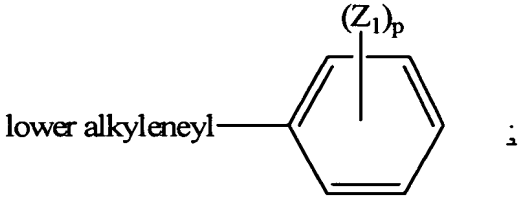
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

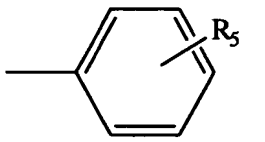
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, $-C(=O)-$alkyl, $-C(=O)-O-$alkyl, $-C(=O)-$aryl, $-C(=O)-$heteroaryl, $-CH(OR_7)-$alkyl, $-C(=W)-$alkyl, $-C(=W)-$aryl, or $-C(=W)-$heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or

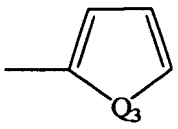


;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

C 11

heteroaryl is



;

wherein Q_3 is –O–, –S–, –NH–, or –CH=N–;

W is CH_2 or CHR_8 or $N–R_9$;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $–NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1–C_3 acyl, aryl, –C(=O)–aryl, or –C(=O)–heteroaryl, wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or $-COOR_{23}$

wherein R_{23} is H or C_1-C_4 alkyl;

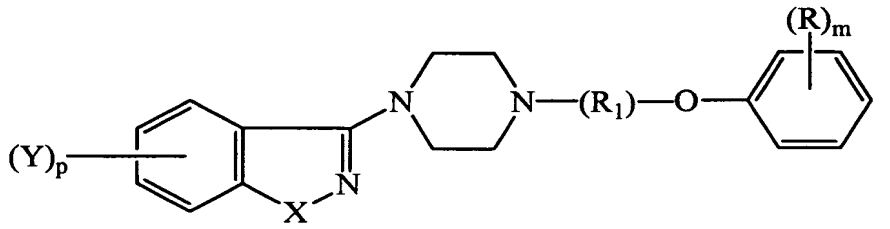
C 11

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

92. (Amended) An analgesic composition, which comprises a compound of the formula

C12



wherein

X is –O–, –S–, –NH–, or –N(R$_2$);

R$_2$ is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C$_3$–C$_{10}$)cycloalkyl, aroyl, (C$_2$–C$_{11}$)alkanoyl, and phenylsulfonyl groups;

aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is –O–;

(R$_1$) is

–CH$_2$–CH=CH–CH$_2$–,

–CH$_2$–C≡C–CH$_2$–,

–CH$_2$–CH=CH–CH$_2$–CH$_2$–,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

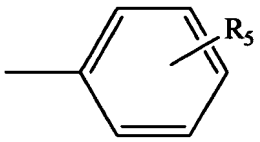
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, $-CH(OR_7)$-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

C 12

wherein alkyl is lower alkyl;

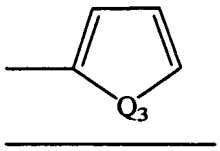
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

C12

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl, wherein aryl and heteroaryl are as defined above; and

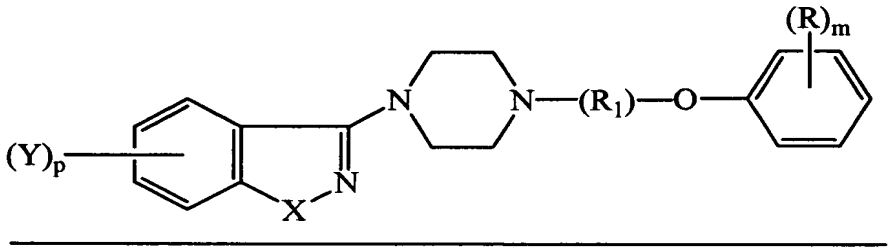
m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$

wherein R_{23} is H or C_1-C_4 alkyl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

93. (Amended) An analgesic composition, which comprises a compound of the formula



C12

wherein

X is -O-, -S-, -NH-, or -N(R_2);

R_2 is selected from the group consisting of lower alkyl, aryl lower alkyl, aryl, (C_3-C_{10}) cycloalkyl, aroyl, (C_2-C_{11}) alkanoyl, and phenylsulfonyl groups;

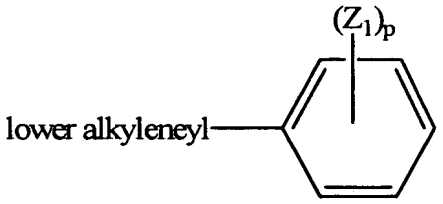
aryl is as defined hereinafter;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy, or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



C12

wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen;

R_{20} is $-(CH_2)_n-$, where n is 2, 3, 4 or 5;

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

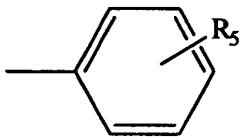
the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl,

-CH(OR$_7$)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

aryl is phenyl or

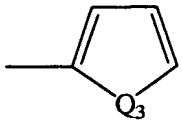


;

C 12

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl, or -C(=O)-heteroaryl,

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the exclusion of compounds wherein X is O or S, Y is hydrogen, and R is hydrogen, C_1-C_4 alkyl, chlorine, fluorine, bromine, iodine, cyano, C_1-C_4 alkoxy, or -$COOR_{23}$

C12

wherein R_{23} is H or C_1-C_4 alkyl;

with the exclusion of compounds wherein X is -S-, R_1 is R_{20}, R is H, and m=1;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

104. (Amended) A compound as claimed in claim 96, wherein X is -O-, -S-, or -NH-; Y is H, Cl, F, or $-CF_3$; R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, -OH, Cl, F, Br, I, C_1-C_3 monoalkylamino, acylamino, $-NO_2$, $-OCF_3$, or $-CF_3$; and n is 2, 3, or 4.

C13